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Craig D. Cuttner

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KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

CHAUDRY, MUJTABA M

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/620,964	<b>Applicant(s)</b> CUTTNER ET AL.	
	<b>Examiner</b> M. MUJTABA K. CHAUDRY	<b>Art Unit</b> 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 40-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-19, 40-46 and 48-62 is/are rejected.
- 7) ☒ Claim(s) 8 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicants' response was received December 21, 2007.

- Applicant's arguments with respect to claims 1-19 and 40-42 have been considered but are moot in view of the new ground(s) of rejection.
- Claims 8 and 47 are objected to as containing allowable subject matter.
- Claims 1-7, 9-19, 40-46 and 48-62 remain rejected.

Application is pending.

#### ***Response to Arguments***

Applicant's arguments with respect to claim 1-19 and 40-62 have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a).

#### ***Allowable Subject Matter***

Claims 8 and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 103***

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

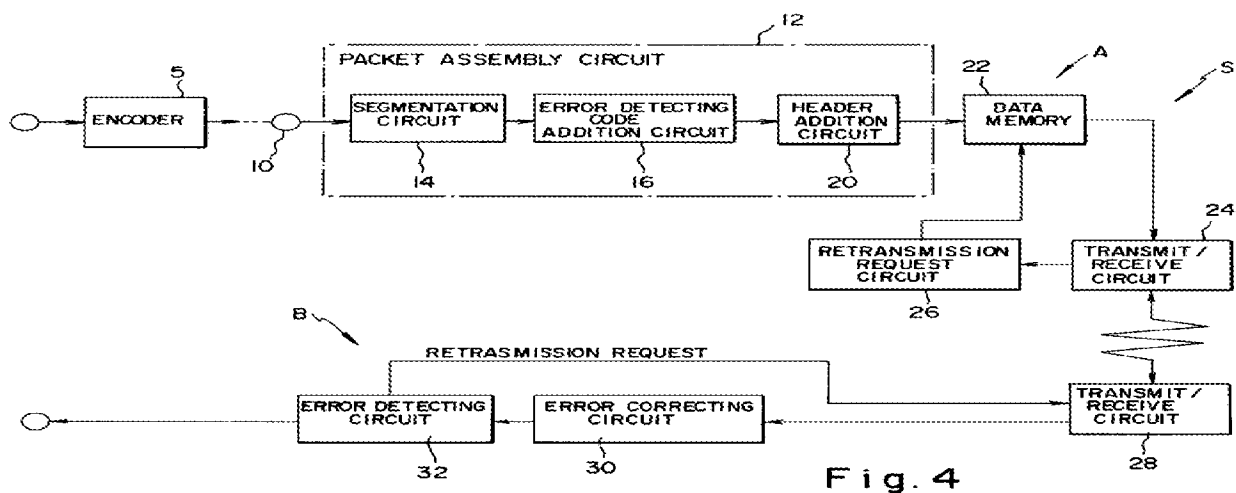
**Claims 1-7, 9-19, 40-46 and 47-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (USPN 5844918) in view of Applicants Admitted Prior Art (AAPA) further in view of Wolf et. al. (herein after: Wolf, USPN 7243291).**

As per claim 1, Kato substantially teaches (abstract and Figure 4) a data transmission and reception apparatus wherein an error correcting code including of basic data and a BCH-based parity code appended to thereto is divided into smaller packets. The Examiner would like to point out that basic data as taught by Kato is shown in Figure 5 to comprise of multiple packets, which is analogous to a data package with at least two data elements. Kato teaches that an error detecting code (analogous to code point values) is appended to each of the thus-divided packets, so that transmission basic data is formed. When the transmission basic data is received, the basic data and a BCH-based parity code are derived from the transmission basic data. Error correcting is carried out with respect to the overall transmission basic data. An error detecting operation is carried out with respect to each packet using the error detecting code. If a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Kato teaches (Figure 4) in the data receiver B, the following operations are carried out, as shown in

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FIG. 6 and FIGS. 7a to 7d. To begin with, the transmit/receive circuit 28 receives the transmission data packet. The thus-received transmission data packet has such a configuration as shown in FIG. 7a. After all of the transmission data packets including the BCH code have been received, the error correcting circuit 30 corrects errors in the basic data using the BCH code (in S21 and S22 in FIG. 6). In short, the error correcting circuit 30 derives the basic data BD and the BCH-based parity code BCHD which acts as an error correcting parity code, from the received data packet. Then, errors in the basic data are corrected using the BCH code, as shown in FIGS. 7b and 7c. The BCH code includes the basic data BD and the BCH-based parity code BCHD. More specifically, all the three data packets rather than each data packet, as a whole, are subjected to the error correcting operation. As a matter of course, the CRC codes of the received data packets are separately maintained. There may be a case where errors arising in transmission can be corrected by the error correcting operation.

Kato does not explicitly teach receiving, separately and at different time from the at least two data elements the code point values.



However Wolf teaches (abstract), in an analogous art, a communication system including a transmitter, a receiver, and a serial link, in which encoded data (e.g., video, audio, and optionally also other auxiliary data) are transmitted from the transmitter to the receiver. The serial link can but need not be a TMDS or TMDS-like link. In typical embodiments, packets of encoded audio data are transmitted over each of one or more channels of the link during data islands between bursts of encoded video data, a pixel clock is transmitted over the link, and the receiver regenerates a clock for the audio data using time code data in the packets and the pixel clock. Other aspects of the invention are transmitters for transmitting encoded data and a pixel clock over a serial link, receivers for receiving such data and pixel clock and performing audio clock regeneration, and methods for transmitting encoded data and a pixel clock over a serial link and performing clock regeneration using the transmitted data and pixel clock. Particularly, Wolf teaches (i.e., col. 39, lines 9-17) the transmitter to transmit each packet such that the packet is spread over three channels of TMDS line (i.e., channel 0, 1, and 2) and each subpacket of a packet is spread over two channels of the line (i.e., channel 1 and 2). **The Transmitter separately generates BCH parity bits for each subpacket such that these BCH parity bits for each packet are spread over two channels of the link.** The Examiner would like to point out that the reception of the data bits and check bits is performed on different channels at different times. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the data transmission method of Kato by transmitting the data and the code point values/error detection code separately at different times. This modification would have been obvious to one of ordinary skill in the art at the time the invention was made because one of ordinary skill would have recognized that transmitting data

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and corresponding code point values separately would have increased synchronization capabilities (i.e., Wolf, col. 7).

As per claim 2, Kato substantially teaches, in view of above rejection, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side.

As per claim 3, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that once a request for retransmission is made then that packet for which the request is made for is no longer used and hence discarded.

As per claim 4, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Requesting for retransmission of the invalid packet is a corrective action.

As per claim 5, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side.

As per claim 6, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that once a request for retransmission is made then that packet for which the request is made for is no longer used and hence discarded.

As per claim 7, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the

sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred.

As per claim 9, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred and is not correctable.

As per claim 10, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, which is first network component to second network component.

As per claim 11, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, which is first network component to second network component.

As per claim 12, Kato substantially teaches, in view of above rejections, (abstract and Figure 4) a data transmission and reception apparatus wherein an error correcting code including of basic data and a BCH-based parity code appended to thereto is divided into smaller packets. The Examiner would like to point out that basic data as taught by Kato is shown in Figure 5 to comprise of multiple packets, which is analogous to a data package with at least two data elements. Kato teaches that an error detecting code (analogous to code point values) is appended to each of the thus-divided packets, so that transmission basic data is formed. When the



transmission basic data is received, the basic data and a BCH-based parity code are derived from the transmission basic data. Error correcting is carried out with respect to the overall transmission basic data. An error detecting operation is carried out with respect to each packet using the error detecting code. If a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Kato teaches (Figure 4) in the data receiver B, the following operations are carried out, as shown in FIG. 6 and FIGS. 7a to 7d. To begin with, the transmit/receive circuit 28 receives the transmission data packet. The thus-received transmission data packet has such a configuration as shown in FIG. 7a. After all of the transmission data packets including the BCH code have been received, the error correcting circuit 30 corrects errors in the basic data using the BCH code (in S21 and S22 in FIG. 6). In short, the error correcting circuit 30 derives the basic data BD and the BCH-based parity code BCHD which acts as an error correcting parity code, from the received data packet. Then, errors in the basic data are corrected using the BCH code, as shown in FIGS. 7b and 7c. The BCH code includes the basic data BD and the BCH-based parity code BCHD. More specifically, all the three data packets rather than each data packet, as a whole, are subjected to the error correcting operation. As a matter of course, the CRC codes of the received data packets are separately maintained. There may be a case where errors arising in transmission can be corrected by the error correcting operation.

Kato does not explicitly teach receiving, separately and at different time from the at least two data elements the code point values.

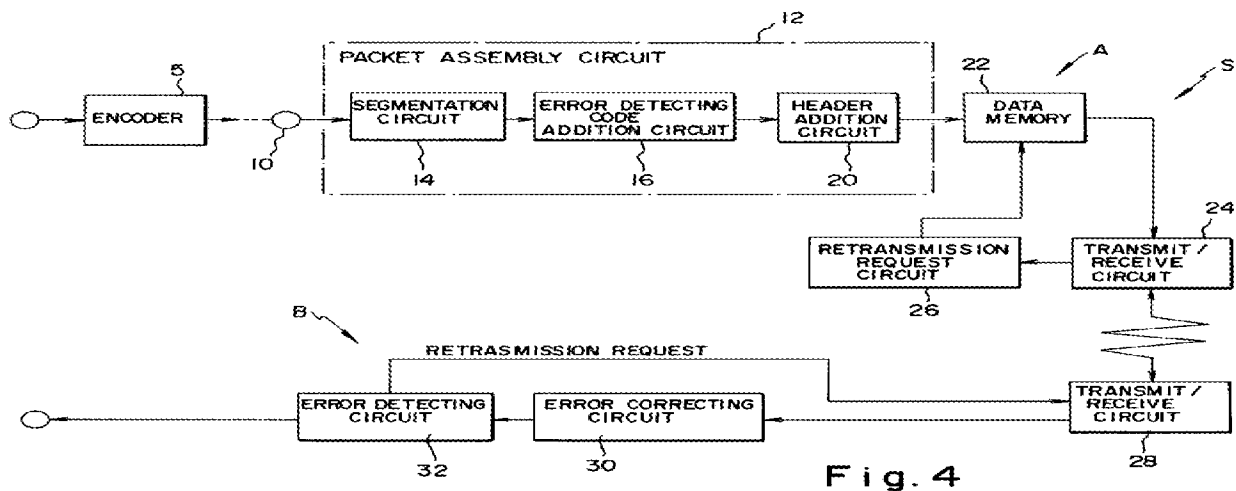


Fig. 4

However Wolf teaches (abstract), in an analogous art, a communication system including a transmitter, a receiver, and a serial link, in which encoded data (e.g., video, audio, and optionally also other auxiliary data) are transmitted from the transmitter to the receiver. The serial link can but need not be a TMDS or TMDS-like link. In typical embodiments, packets of encoded audio data are transmitted over each of one or more channels of the link during data islands between bursts of encoded video data, a pixel clock is transmitted over the link, and the receiver regenerates a clock for the audio data using time code data in the packets and the pixel clock. Other aspects of the invention are transmitters for transmitting encoded data and a pixel clock over a serial link, receivers for receiving such data and pixel clock and performing audio clock regeneration, and methods for transmitting encoded data and a pixel clock over a serial link and performing clock regeneration using the transmitted data and pixel clock. Particularly, Wolf teaches (i.e., col. 39, lines 9-17) the transmitter to transmit each packet such that the packet is spread over three channels of TMDS line (i.e., channel 0, 1, and 2) and each subpacket

of a packet is spread over two channels of the line (i.e., channel 1 and 2). **The Transmitter separately generates BCH parity bits for each subpacket such that these BCH parity bits for each packet are spread over two channels of the link.** The Examiner would like to point out that the reception of the data bits and check bits is performed on different channels at different times. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the data transmission method of Kato by transmitting the data and the code point values/error detection code separately at different times. This modification would have been obvious to one of ordinary skill in the art at the time the invention was made because one of ordinary skill would have recognized that transmitting data and corresponding code point values separately would have increased synchronization capabilities (i.e., Wolf, col. 7).

As per claim 13, AAPA substantially teaches, in view of above rejections, (figure 1) the first network component to be a set top box. The Examiner would like to point out that this is just an example of a transmitter, which—by the way—can be named anything so long as digital data is transmitted.

As per claim 14, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, wherein at the receiver is the error detection/correction which has to monitor the incoming data and log it accordingly to maintain accuracy of the data packets that need retransmission.

As per claim 15, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Requesting for retransmission of the invalid packet is a corrective action.

As per claim 16, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Requesting for retransmission of the invalid packet is a corrective action and the invalid packet is not used.

As per claim 17, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side.

As per claim 18, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred.

As per claim 19, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred and is not correctable.

As per claim 40, Kato substantially teaches, in view of above rejection, (abstract and Figure 4) a data transmission and reception apparatus wherein an error correcting code including of basic data and a BCH-based parity code appended to thereto is divided into smaller packets.

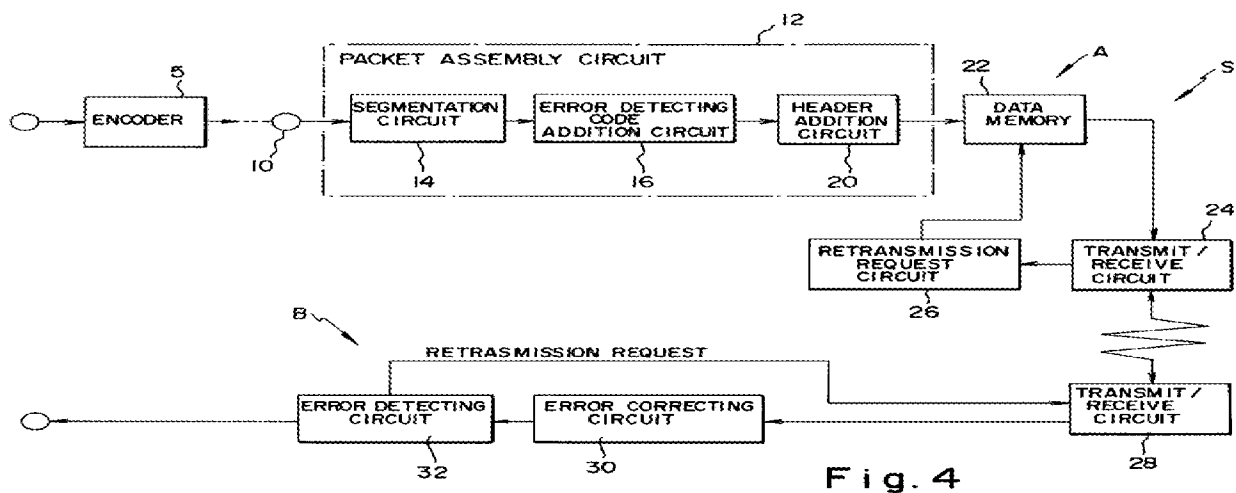
The Examiner would like to point out that basic data as taught by Kato is shown in Figure 5 to comprise of multiple packets, which is analogous to a data package with at least two data elements. Kato teaches that an error detecting code (analogous to code point values) is appended to each of the thus-divided packets, so that transmission basic data is formed. When the transmission basic data is received, the basic data and a BCH-based parity code are derived from the transmission basic data. Error correcting is carried out with respect to the overall transmission basic data. An error detecting operation is carried out with respect to each packet using the error detecting code. If a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that digital data transmission and reception is not possible without computer implementation and therefore inherently, Kato's system has to have computer and computer-readable medium, i.e. software to actually perform transmission. Kato teaches (Figure 4) in the data receiver B, the following operations are carried out, as shown in FIG. 6 and FIGS. 7a to 7d. To begin with, the transmit/receive circuit 28 receives the transmission data packet. The thus-received transmission data packet has such a configuration as shown in FIG. 7a. After all of the transmission data packets including the BCH code have been received, the error correcting circuit 30 corrects errors in the basic data using the BCH code (in S21 and S22 in FIG. 6). In short, the error correcting circuit 30 derives the basic data BD and the BCH-based parity code BCHD which acts as an error correcting parity code, from the received data packet. Then, errors in the basic data are corrected using the BCH code, as shown in FIGS. 7b and 7c. The BCH code includes the basic data BD and the BCH-based parity code BCHD. More specifically, all the three data packets rather than each data packet, as a whole, are subjected to the error correcting operation.

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As a matter of course, the CRC codes of the received data packets are separately maintained.

There may be a case where errors arising in transmission can be corrected by the error correcting operation. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the data transmission method of Kato by transmitting the data and the code point values/ error detection code separately. This modification would have been obvious to one of ordinary skill in the art at the time the invention was made because one of ordinary skill would have recognized that transmitting data and corresponding code point values separately would have increased synchronization capabilities.

Kato does not explicitly teach receiving, separately and at different time from the at least two data elements the code point values.



However Wolf teaches (abstract), in an analogous art, a communication system including a transmitter, a receiver, and a serial link, in which encoded data (e.g., video, audio, and optionally also other auxiliary data) are transmitted from the transmitter to the receiver. The serial link can but need not be a TMDS or TMDS-like link. In typical embodiments, packets of encoded audio data are transmitted over each of one or more channels of the link during data

islands between bursts of encoded video data, a pixel clock is transmitted over the link, and the receiver regenerates a clock for the audio data using time code data in the packets and the pixel clock. Other aspects of the invention are transmitters for transmitting encoded data and a pixel clock over a serial link, receivers for receiving such data and pixel clock and performing audio clock regeneration, and methods for transmitting encoded data and a pixel clock over a serial link and performing clock regeneration using the transmitted data and pixel clock. Particularly, Wolf teaches (i.e., col. 39, lines 9-17) the transmitter to transmit each packet such that the packet is spread over three channels of TMDS line (i.e., channel 0, 1, and 2) and each subpacket of a packet is spread over two channels of the line (i.e., channel 1 and 2). **The Transmitter separately generates BCH parity bits for each subpacket such that these BCH parity bits for each packet are spread over two channels of the link.** The Examiner would like to point out that the reception of the data bits and check bits is performed on different channels at different times. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the data transmission method of Kato by transmitting the data and the code point values/error detection code separately at different times. This modification would have been obvious to one of ordinary skill in the art at the time the invention was made because one of ordinary skill would have recognized that transmitting data and corresponding code point values separately would have increased synchronization capabilities (i.e., Wolf, col. 7).

As per claim 41, Kato substantially teaches, in view of above rejection, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side.

As per claim 42, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that once a request for retransmission is made then that packet for which the request is made for is no longer used and hence discarded.

As per claim 43, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Requesting for retransmission of the invalid packet is a corrective action.

As per claim 44, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side.

As per claim 45, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that once a request for retransmission is made then that packet for which the request is made for is no longer used and hence discarded.

As per claim 46, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred.

As per claim 48, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made



when the characteristic of the particular data element is not useful or when an error has occurred and is not correctable.

As per claim 49, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, which is first network component to second network component.

As per claim 50, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, which is first network component to second network component.

As per claim 51, Kato substantially teaches, in view of above rejections, (abstract and Figure 4) a data transmission and reception apparatus wherein an error correcting code including of basic data and a BCH-based parity code appended to thereto is divided into smaller packets. The Examiner would like to point out that basic data as taught by Kato is shown in Figure 5 to comprise of multiple packets, which is analogous to a data package with at least two data elements. Kato teaches that an error detecting code (analogous to code point values) is appended to each of the thus-divided packets, so that transmission basic data is formed. When the transmission basic data is received, the basic data and a BCH-based parity code are derived from the transmission basic data. Error correcting is carried out with respect to the overall transmission basic data. An error detecting operation is carried out with respect to each packet using the error detecting code. If a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that digital

data transmission and reception is not possible without computer implementation and therefore inherently, Kato's system has to have computer and computer-readable medium, i.e. software to actually perform transmission.

Kato does not explicitly teach to receive the code point values corresponding to the data package from a second network component as stated in the present application.

However Wolf teaches (abstract), in an analogous art, a communication system including a transmitter, a receiver, and a serial link, in which encoded data (e.g., video, audio, and optionally also other auxiliary data) are transmitted from the transmitter to the receiver. The serial link can but need not be a TMDS or TMDS-like link. In typical embodiments, packets of encoded audio data are transmitted over each of one or more channels of the link during data islands between bursts of encoded video data, a pixel clock is transmitted over the link, and the receiver regenerates a clock for the audio data using time code data in the packets and the pixel clock. Other aspects of the invention are transmitters for transmitting encoded data and a pixel clock over a serial link, receivers for receiving such data and pixel clock and performing audio clock regeneration, and methods for transmitting encoded data and a pixel clock over a serial link and performing clock regeneration using the transmitted data and pixel clock. Particularly, Wolf teaches (i.e., col. 39, lines 9-17) the transmitter to transmit each packet such that the packet is spread over three channels of TMDS line (i.e., channel 0, 1, and 2) and each subpacket of a packet is spread over two channels of the line (i.e., channel 1 and 2). **The Transmitter separately generates BCH parity bits for each subpacket such that these BCH parity bits for each packet are spread over two channels of the link.** The Examiner would like to point out that the reception of the data bits and check bits is performed on different channels at

different times and therefore are over different networks. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the data transmission method of Kato by transmitting the data and the code point values/error detection code separately at different times from different network channels as suggested by Wolf. This modification would have been obvious to one of ordinary skill in the art at the time the invention was made because one of ordinary skill would have recognized that receiving the code point values corresponding to the data package from a second/different network component would have increased synchronization capabilities (i.e., Wolf, col. 7).

As per claim 52, AAPA substantially teaches, in view of above rejections, (figure 1) the first network component to be a set top box. The Examiner would like to point out that this is just an example of a transmitter, which—by the way—can be named anything so long as digital data is transmitted.

As per claim 53, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, wherein at the receiver is the error detection/correction which has to monitor the incoming data and log it accordingly to maintain accuracy of the data packets that need retransmission.

As per claim 54, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. Requesting for retransmission of the invalid packet is a corrective action.

As per claim 55, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the

sending side. Requesting for retransmission of the invalid packet is a corrective action and the invalid packet is not used.

As per claim 56, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side.

As per claim 57, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred.

As per claim 58, Kato substantially teaches, in view of above rejections, (abstract) that if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that a request for retransmission is made when the characteristic of the particular data element is not useful or when an error has occurred and is not correctable.

As per claim 59, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, which is first network component to second network component.

As per claim 60, Kato substantially teaches, in view of above rejections, (Figure 5 and abstract) that code point values are successively received and if a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner

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would like to point out that once a request for retransmission is made then that packet for which the request is made for is no longer used and hence discarded.

As per claim 61, Kato substantially teaches, in view of above rejections, (Figures 4 and 5) shows data to be transmitted in packets associated with error detection/correction data. The data and error detection/correction is shown to be transmitted from the transmitter to the receiver, which is first network component to second network component.

As per claim 62, Kato substantially teaches, in view of above rejections, (abstract and Figure 4) a data transmission and reception apparatus wherein an error correcting code including of basic data and a BCH-based parity code appended to thereto is divided into smaller packets. The Examiner would like to point out that basic data as taught by Kato is shown in Figure 5 to comprise of multiple packets, which is analogous to a data package with at least two data elements. Kato teaches that an error detecting code (analogous to code point values) is appended to each of the thus-divided packets, so that transmission basic data is formed. When the transmission basic data is received, the basic data and a BCH-based parity code are derived from the transmission basic data. Error correcting is carried out with respect to the overall transmission basic data. An error detecting operation is carried out with respect to each packet using the error detecting code. If a packet is found to contain errors, a request for retransmission of that packet will be sent to the sending side. The Examiner would like to point out that digital data transmission and reception is not possible without computer implementation and therefore inherently, Kato's system has to have computer and computer-readable medium, i.e. software to actually perform transmission.

Kato does not explicitly teach to receive the code point values corresponding to the data package from a second network component as stated in the present application.

However Wolf teaches (abstract), in an analogous art, a communication system including a transmitter, a receiver, and a serial link, in which encoded data (e.g., video, audio, and optionally also other auxiliary data) are transmitted from the transmitter to the receiver. The serial link can but need not be a TMDS or TMDS-like link. In typical embodiments, packets of encoded audio data are transmitted over each of one or more channels of the link during data islands between bursts of encoded video data, a pixel clock is transmitted over the link, and the receiver regenerates a clock for the audio data using time code data in the packets and the pixel clock. Other aspects of the invention are transmitters for transmitting encoded data and a pixel clock over a serial link, receivers for receiving such data and pixel clock and performing audio clock regeneration, and methods for transmitting encoded data and a pixel clock over a serial link and performing clock regeneration using the transmitted data and pixel clock. Particularly, Wolf teaches (i.e., col. 39, lines 9-17) the transmitter to transmit each packet such that the packet is spread over three channels of TMDS line (i.e., channel 0, 1, and 2) and each subpacket of a packet is spread over two channels of the line (i.e., channel 1 and 2). **The Transmitter separately generates BCH parity bits for each subpacket such that these BCH parity bits for each packet are spread over two channels of the link.** The Examiner would like to point out that the reception of the data bits and check bits is performed on different channels at different times and therefore are over different networks. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the data transmission method of Kato by transmitting the data and the code point values/error detection

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code separately at different times from different network channels as suggested by Wolf. This modification would have been obvious to one of ordinary skill in the art at the time the invention was made because one of ordinary skill would have recognized that receiving the code point values corresponding to the data package from a second/different network component would have increased synchronization capabilities (i.e., Wolf, col. 7).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiries concerning this communication should be directed to the examiner, Mujtaba Chaudry who may be reached at 571-272-3817. The examiner may normally be reached Mon – Thur 6:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on 571-272-6962.



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/Mujtaba K Chaudry/  
Primary Examiner, Art Unit 2112  
March 21, 2008